

motion vectors for a macro block desired to be estimated. Independent claim 6 is drawn to an adaptive motion apparatus.

In regard to the claimed estimation aspects of claims 1 and 6, the Examiner cites steps 940, 955, 958 in Figure 9; and Figure 4 of Chang. In regard to step 940, Chang discloses that “if the absolute difference between motion vectors for the top and bottom fields, MV_{tt} and MV_{bb}, is less than a threshold, the frame search should be performed.”¹ The Examiner also cites to col. 6, lines 53-61 for allegedly disclosing the claimed estimating motion in a restricted search area centered on the estimated location.

Applicant respectfully submits that for a reference to anticipate a claim, the “identical invention must be shown in as complete detail as is contained in the ... claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Turning to the claimed features, claim 1 recites that if an error of the candidate motion vectors estimated in step (a) is in a threshold range, motion is estimated in a restricted search area centered on the estimated location, and otherwise, motion is estimated in the whole of the search area. Claim 6 recites a motion estimation unit that includes similar features.

With reference to Figure 9 of Chang, step 940 determines whether an amount is “less than a threshold.” If the amount in Chang is less than the threshold, then a frame search is preformed in step 945 (see col. 14, lines 1-40 and Figure 9 of Chang). On the other hand, if the amount is greater than the threshold, then step 955 is performed, which is disclosed as being an INTRA/NoMV decision. (See col. 14, lines 46-55 of Chang). However, this yes/no logic step

¹ See Chang, col. 13, lines 64-66.

940 does not teach the features of claims 1 and 6 regarding the estimation of motion in the restricted area and, otherwise, the estimation of motion in the whole of the search area. This is because Chang does not disclose the estimating motion in the various areas (i.e., restricted search area and the whole search area), let alone in sufficient detail, to place one in possession of the claimed invention. For these reasons, Applicant submits that claims 1 and 6 are not anticipated by or rendered obvious in view of Chang. Applicant also submits that claims 2, 4, 7-8, 10-11 and 13 are not anticipated by or rendered obvious in view of Chang at least because they respectively depend on claims 1 and 6.

Claims 8 and 11

Claims 8 and 11 were added in the previous Amendment. Claim 8 is drawn to an adaptive motion estimation process; and claim 11 is drawn to a motion estimation processing device. The Examiner applies the same portions of Chang, used in the rejection of claim 1 above, against claims 8 and 11. Applicant submits that Chang does not disclose a) “determining respective correlations between the selected portion and each of a zero motion vector, a previous motion vector and a motion vector corresponding to neighbor blocks”; in combination with b) “selecting one of a plurality of motion estimation algorithms based on the respective correlations.” For example, Chang does not disclose the selecting of a motion estimation algorithm “based on” the recited respective correlation.

Further, Applicant respectfully submits that the Office Action does not properly address the features of claims 8 and 11. This is because the grounds of rejection for claim 8 states “see the rejections of claims 1-2 and 6 above.” (See line 1, page 4 of the Office Action.) However, claims 8 and 11 contain different recitations than claims 1-2 and 6. Applicant believes that the

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case is in condition for allowance; however, if a further action on the merits is required, the Examiner is requested to explicitly note the particular areas of Chang that are applied.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

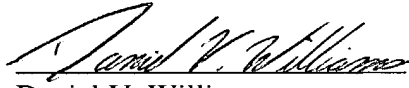
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